GROMOVA, G.; MASHKOVICH, S.A.

Some results of numerical forecasts of the baric field at sea level and in the middle troposphere. Trudy TSIP no.86:49-54 '59.
(MIRA 12:9)

(Atmospheric pressure)

GROMOVA, G.G.

Characteristics of atmospheric circulation over Eastern Siberia and the adjacent part of the Pacific Ocean. Meteor. i gidrol. no.6:28-32 Je '62. (MIRA 15:6)

(Atmospheric temperature)

S/546/62/000/119/001/002
A006/A101

AUTHOR: Gromova, G. G.

TITLE: Peculiarities of circulation during strong cooling in the European territory of the USSR

SOURCE: Moscow. Tsentral'nyy institut prognozov. Trudy. no. 119, 1962. Voprosy dolgosrochnykh prognozov maloy zablagovremennosti. 51 - 69

TEXT: The author attempts to determine the correlation between strong cooling in the European territory of the USSR and changes in the intensity of meridional and zonal circulation in various areas of the northern hemisphere. A detailed analysis is made of ultrapolar processes which are classified according to a method developed by A. L. Kats. The investigation is based on 39 synoptic periods when cooling was caused by the motion of anticyclones along the ultrapolar axis. To reveal quantitative circulation characteristics in the investigated 39 synoptic periods of strong cooling, indices of zonal and meridional circulation for each of them are analyzed. Circulation indices of the North-American sector are studied

Card 1/3

Peculiarities of circulation during...

to reveal circulation peculiarities in remote areas. A detailed analysis is made of peculiarities in strong cooling during processes with 3 different evolution types of the upper-air frontal zone: 1) monotonous northward evolution of the crest; 2) southward direction of the crest; 3) quasi-stationary state of the crest. The studies lead to the following conclusions: The lowest drop of the air temperature in the European territory of the USSR is observed during the motion of ultrapolar anticyclones. Strong cooling during the ultrapolar surge to the East-European territory is predetermined by an intensive tropospheric cold seat in the region of the Taymyr Peninsula. During synoptic periods of ultrapolar surge on the European territory of the USSR, the meridional state predominates upon the zonal state over the Atlantic Eurasian sector of the northern hemisphere (I' is greater than norm N; I' is the ratio of the indices of meridional, I_m, and zonal, I_z, circulation). Simultaneously, an anomalous development of zonality and meridionality takes place in the North-American sector. I' is then $\frac{I_m}{I_z} < N$. To the greatest negative deviation of I' from norm N, corresponds a maximum southward penetration of ultrapolar anticyclones over Eastern Europe. As a result of the upper-air crest growth over Scandinavia and an increased amplitude of the upper-air

Card 2/3

Peculiarities of circulation during...

S/546/62/000/119/001/002
A006/A101

frontal zone fluctuation during the synoptic period, and the simultaneous evolution of the crest top to the north-east, the anticyclone moves over the earth surface along an ultrapolar trajectory with a high western component. The main cold is then observed in the northern section of Eastern Europe. If the upper-air fluctuation amplitude over Scandinavia decreases during the synoptic period, the anticyclone over the earth surface moves along the ultrapolar trajectory, but to the south-west, attaining the extremal southern regions of the Ukraine. The main cold is then observed in the southern section of Eastern Europe. There are 7 figures and 5 tables.

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S/546/62/000/119/002/002
A006/A101

AUTHOR: Gromova, G. G.

TITLE: Characteristics of zonal and meridional processes over East-Siberia and the adjacent section of the Pacific Ocean

SOURCE: Moscow. Tsentral'nyy institut prognozov. Trudy. no. 119. 1962
Voprosy dolgosrochnykh prognozov maloyzablagovremennosti. 104 - 112

TEXT: The author presents results of investigating peculiarities in the formation of circulation characteristics during several years over East-Siberia and the adjacent section of the Pacific, obtained from analyzing the frequency of concrete circulation types in this region. For this purpose the author used a catalogue of daily indices of zonal and meridional circulation according to AT_{500} charts for various sectors of the northern hemisphere during 1954 - 61. Macroprocesses are classified with the aid of quantitative criteria. The frequency of the circulation types over the seasons is investigated. The investigation yields the following results. The intensity of meridional circulation over the

Card 1/3

area investigated is characterized by a decrease from the winter to the summer. Its evaluation from AT_{500} charts is on the average twice and more below the actual evaluation, and even four times less during the summer, because relatively uniform meridional macroprocesses are developed over the area investigated during the cold season. In the summer season, however, opposite meridional circulation types (M and W) alternate rapidly, at a relatively low prevalence of typical summer macroprocesses (C and E). Meridional processes with an active southern branch of the upper-air frontal zone are observed most frequently; processes with an active northern branch of the upper-air frontal zone occur very rarely. This is probably one of the causes, that in the 30 - 50° northern latitude zone of East-Asia and the adjacent section of the Pacific, intensive streams are observed. Actually, the mean annual frequency of zonal and meridional type synoptic processes with an active southern branch of the UFZ in the 35 - 50° n. l. area, is 70%. Of the four types of meridional circulation the highest yearly frequency occurs for the type with mixed orientation of the UFZ crest (M), and lowest frequency is shown by the type with eastern orientation of the UFZ crest (E).

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S/546/62/000/119/002/002
Characteristics of zonal and meridional processes over.. A006/A101

In the seasonal distribution of the circulation types, zonal processes are characteristic of the autumn; type M (mixed) meridional processes are characteristic of the winter; type W (western) of spring, and types C (central) and E (eastern) of the summer. The predominance (62.5%) of type M meridional circulation is the cause of stable winter monsoons over the aforementioned region. This proves also the low horizontal macroturbulence of winter processes. During the summer, type C meridional processes prevail over the other types; this causes lesser stability of summer monsoons and a greater horizontal turbulence over this region. There are 8 tables and 1 figure.

Card 3/3

GROMOVA, G.G., kand. geograf. nauk; KNYAZEVA, V.I., kand. geograf. nauk

Two-year cycle of the formation dates of the summer stratospheric anticyclone. Meteor. i gidrol. no.6:35-36 Je '64
(MIRA 17:8)

1. TSentral'nyy institut prognozov.

LOMOVATSKIY, Yefim Grigor'evich; GROMOVA, Galina Mikhaylovna; VASHKEVICH, Ye.Yu., red.; ASTAKHOVA, I.V., tekhn. red.

[Administration of state-controlled trade in the U.S.S.R.] Upravlenie gosudarstvennoi vnutrennei torgovlei v SSSR. Moskva, Gos. izd-vo iurid. lit-ry, 1957. 174 p. (MIRA 11:9)
(Trade regulation)

L 27770-65 EPF(n)-2/EPR/EWP(k)/EWT(m)/EW P(b)/EWA(d)/EWP(e)/EWP(t) Pf-4/Ps-4/
Pu-4 IJP(c) AT/WH/MJW/JD/HW/JG
ACCESSION NR: AT5003399 S/2776/64/000/038/0029/0041

AUTHOR: Vinograd, M. I.; Gromova, G. P.; Smirnova, A. V.; Krasnova, A. K.

TITLE: A study of the reasons for the lowered plasticity in alloy EI437b at high temperatures

SOURCE: Moscow. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii. Sbornik trudov, no. 38, 1964. Novyye metody ispytaniy metallov; metallograficheskiye issledovaniya i mekhanicheskiye ispytaniya metallov (New methods in the analyses of metals; metallographic investigations and mechanical analyses of metals), 29-41

TOPIC TAGS: alloy plasticity, tensile test, alloy forgeability, metallographic examination, electronic microphotography, petrographic analysis, nonmetallic inclusion, vitreous inclusion, high temperature plasticity / alloy EI437B

ABSTRACT: The reasons for the lowered plasticity of alloy EI437B under the influence of hot working were investigated by forgeability, impact and tensile strength tests within the 1200 - 1250 C temperature range. Conventional methods were employed for macro- and microstructural examinations of nonmetallic inclusions and the fracture surface was studied under the electron microscope. Ti-

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tanium nitride inclusions were revealed by thermal etching in all specimens. Petrographic analysis showed the occurrence of coarse vitreous inclusions in the form of a film with a thickness reaching 0.1 mm in low-plasticity specimens. These inclusions were found to be primarily composed of SiO_2, their shape and location along interaxial sections and crystal boundaries being indicative of their origin during crystallization when the excess silicon monoxide was separated from the solution. The crystal boundaries in these specimens were thick as a result of the separation of various phases made visible by thermal etching at 650 - 700 C, which also rendered dendritic segregation more conspicuous. The diffraction pattern showed the formation of Cr_5B_6, Cr_3B_4 and $TiNi_3$ along the grain boundaries accompanied by the frequent occurrence of vitreous nonmetallic inclusions. The results of room temperature impact tests varied widely from those of tests carried out at 1250 C; in the cold, brittle intercrystalline fractures without any trace of plastic deformation were identified. At high temperatures, border phases predominate and plastic deformation occurs with the formation of wavy lines. Specimens with an adequate plasticity displayed appreciably fewer areas of deformation and, therefore, the plasticity of the metal was higher. The authors suggest that investigations be continued and the possibility of developing methods for the production of metals with a predetermined plasticity be explored. A more de-

L 27770-65
ACCESSION NR: AT5003399

9

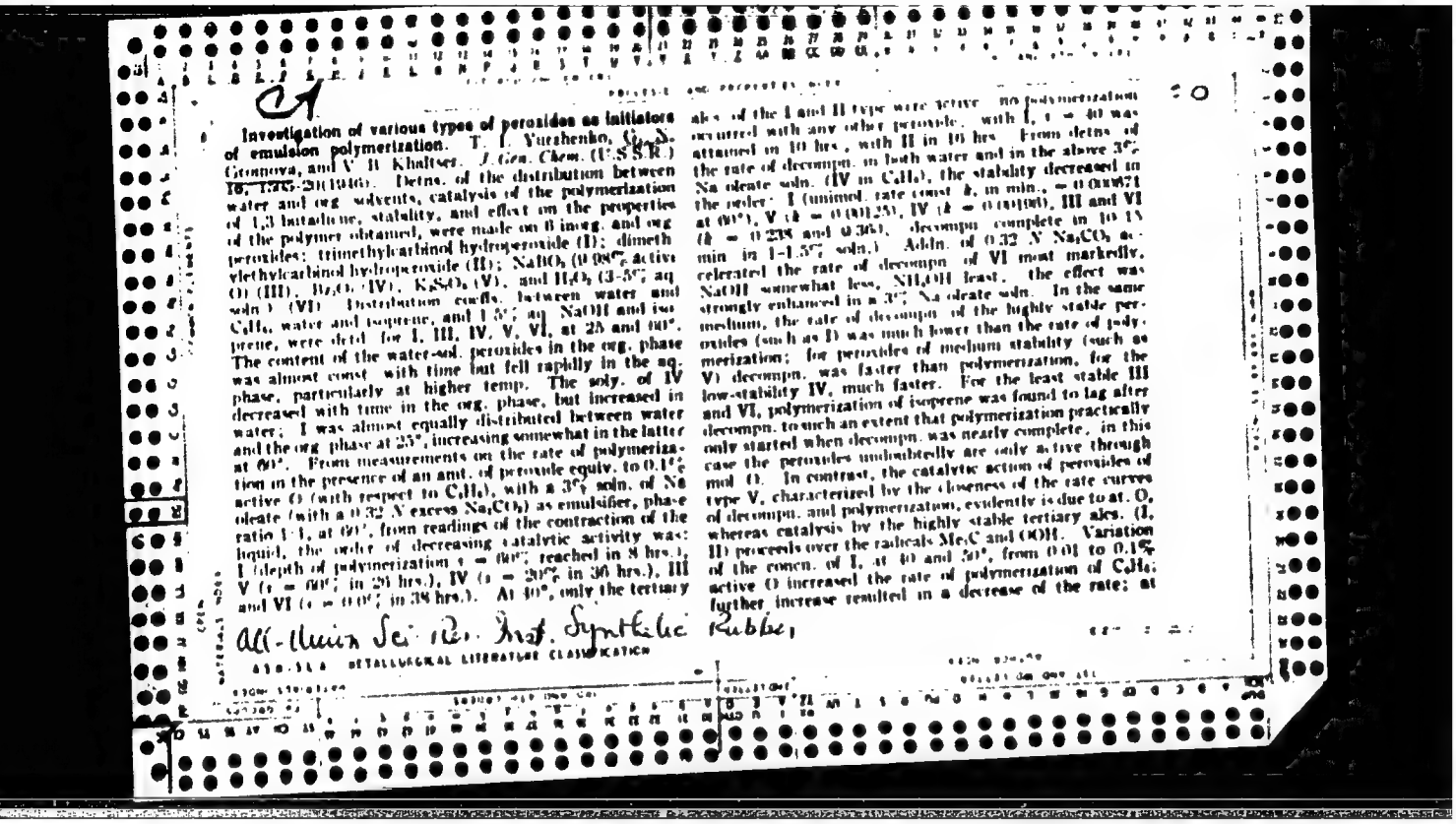
tailed analysis of the composition of plasticity-lowering inclusions is also recommended along with a comparative study of hot plasticity and oxidation resistance. "The petrographic analysis was carried out by A. G. Ryl'nikova and S. B. Lebedeva; the x-ray spectroscopy was carried out by T. V. Yegorshina and S. B. Maslenkov, thermal destruction was carried out in a device developed under the direction of B. M. Ovsyannikov (Bach. Tech. Sci.); I. V. Kikhnova, L. A. Volkova, and N. F. Poplavskaya also took part in the work." Orig. art. has: 23 figures and 1 table.

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii, Moscow (Central ferrous metallurgy scientific research institute)

SUBMITTED: 00 ENCL: 00 SUB CODE: MM

NO REF SOV: 004 OTHER: 000

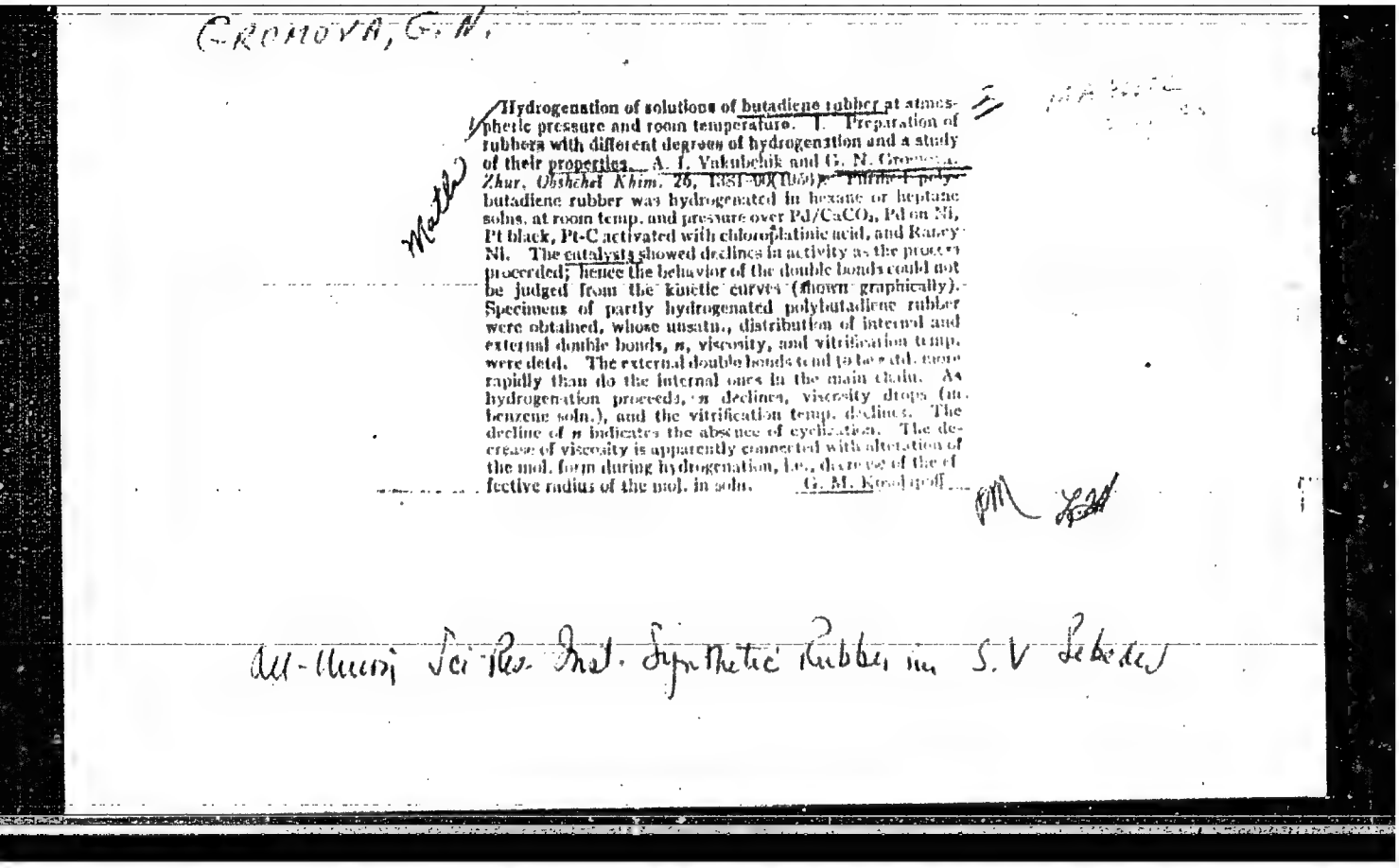
Card 3/3



C1

Investigation of various types of peroxides as initiators of emulsion polymerization. T. I. Yurzhenko, G. S. Gromova, and V. B. Khaltser. *J. Gen. Chem.* (U.S.S.R.) 16, 1245-20(1946). Detns. of the distribution between water and org. solvents, catalysis of the polymerization of 1,3 butadiene, stability, and effect on the properties of the polymer obtained, were made on 6 imorg. and org. peroxides: trimethylcarbinol hydroperoxide (I); dimethylethylcarbinol hydroperoxide (II); $NaBO_3$ (0.98% active O) (III); H_2O_2 (IV); $K_2S_2O_8$ (V), and H_2O_2 (3-5% aq. soln.) (VI). Distribution coeffs. between water and C_6H_6, water and isoprene, and 1.5% aq. NaOH and isoprene, were detd. for I, III, IV, V, VI, at 25 and 60°. The content of the water-sol. peroxides in the org. phase was almost const. with time but fell rapidly in the aq. phase, particularly at higher temp. The soly. of IV decreased with time in the org. phase, but increased in water; I was almost equally distributed between water and the org. phase at 25°, increasing somewhat in the latter at 60°. From measurements on the rate of polymerization in the presence of an amt. of peroxide equiv. to 0.1% active O (with respect to C_6H_6), with a 3% soln. of Na oleate (with a 0.32 *N* excess Na_2CO_3) as emulsifier, phase ratio 1:1, at 60°, from readings of the contraction of the liquid, the order of decreasing catalytic activity was: I (depth of polymerization x = 60%, reached in 8 hrs.), V (x = 60%; in 20 hrs.), IV (x = 20% in 36 hrs.), III and VI (x = 0.0% in 38 hrs.). At 40°, only the tertiary alcs. of the I and II type were active; no polymerization occurred with any other peroxide, with I, x = 40 was attained in 10 hrs., with II in 10 hrs. From detns. of the rate of decompn. in both water and in the above 3% Na oleate soln. (IV in C_6H_6), the stability decreased in the order: I (unimol. rate const. k, in min., = 0.000371 at 60°), V (k = 0.00125), IV (k = 0.0198), III and VI (k = 0.238 and 0.361), decompn. complete in 10-15 min. in 1-1.5% soln.). Addn. of 0.32 *N* Na_2CO_3 accelerated the rate of decompn. of VI most markedly, NaOH somewhat less, NH_4OH least; the effect was strongly enhanced in a 3% Na oleate soln. In the same medium, the rate of decompn. of the highly stable peroxides (such as I) was much lower than the rate of polymerization; for peroxides of medium stability (such as V) decompn. was faster than polymerization, for the low-stability IV, much faster. For the least stable III and VI, polymerization of isoprene was found to lag after decompn. to such an extent that polymerization practically only started when decompn. was nearly complete, in this case the peroxides undoubtedly are only active through decompn. and polymerization, evidently is due to at. O, whereas catalysis by the highly stable tertiary alcs. (I, II) proceeds over the radicals Me_2C and OOH. Variation of the concn. of I, at 40 and 50°, from 0.01 to 0.1% active O increased the rate of polymerization of C_6H_6; further increase resulted in a decrease of the rate; at

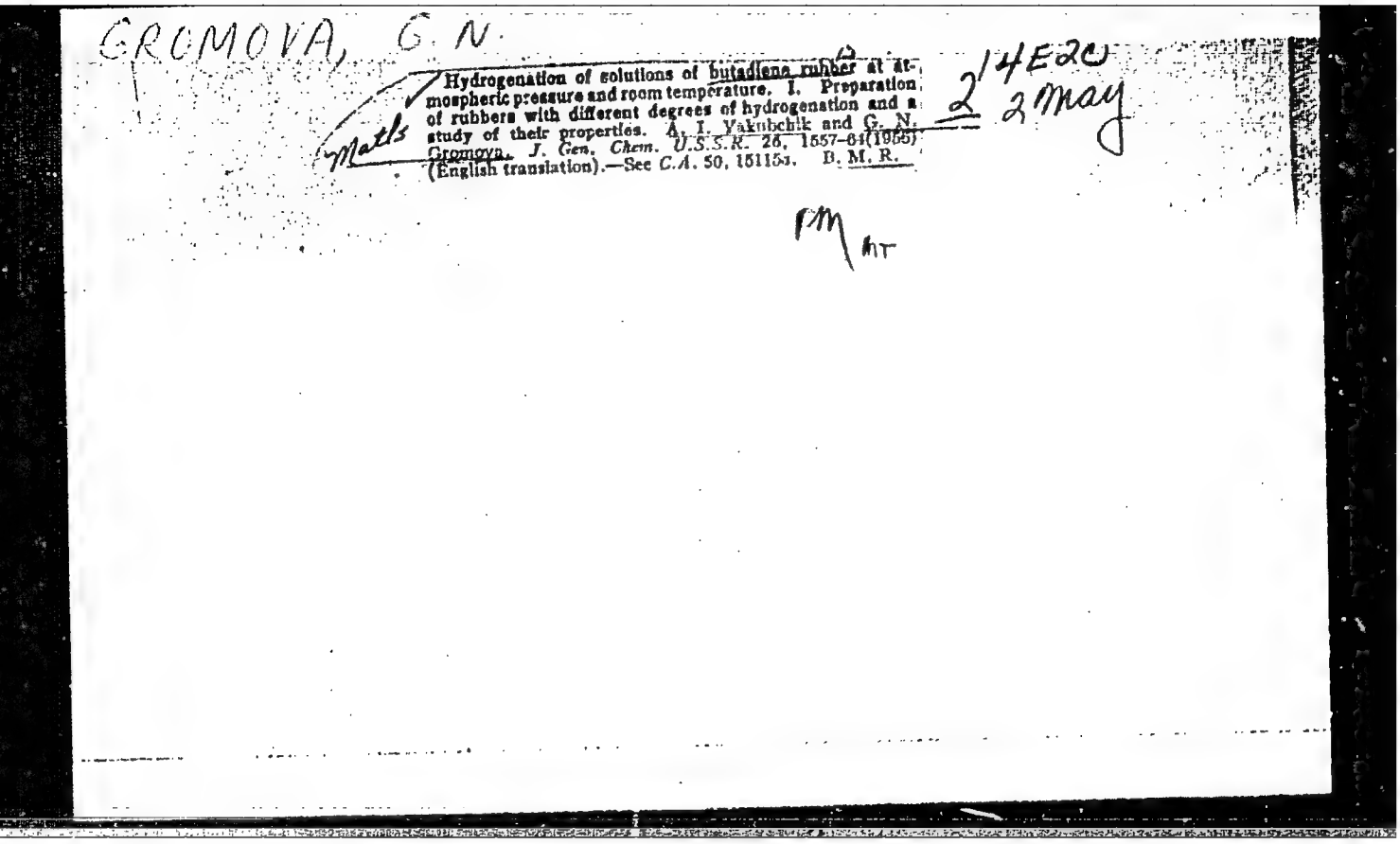
All-Union Sci. Res. Inst. Synthetic Rubber



CROMOVA, G. N.

Hydrogenation of solutions of butadiene rubber at atmospheric pressure and room temperature. I. Preparation of rubbers with different degrees of hydrogenation and a study of their properties. A. I. Yakubchik and G. N. Gromova. *Zhur. Obshchel Khim.* 26, [illegible] (1956). Pilot-plant polybutadiene rubber was hydrogenated in hexane or heptane solns. at room temp. and pressure over Pd/$CaCO_3$, Pd on Ni, Pt black, Pt-C activated with chloroplatinic acid, and Raney Ni. The catalysts showed declines in activity as the process proceeded; hence the behavior of the double bonds could not be judged from the kinetic curves (shown graphically). Specimens of partly hydrogenated polybutadiene rubber were obtained, whose unsatn., distribution of internal and external double bonds, n, viscosity, and vitrification temp. were detd. The external double bonds tend to be satd. more rapidly than do the internal ones in the main chain. As hydrogenation proceeds, n declines, viscosity drops (in benzene soln.), and the vitrification temp. declines. The decline of n indicates the absence of cyclization. The decrease of viscosity is apparently connected with alteration of the mol. form during hydrogenation, i.e., decrease of the effective radius of the mol. in soln. G. M. Kosolapoff

All-Union Sci.-Res. Inst. Synthetic Rubber im. S. V. Lebedev



GROMOVA, G. N.

Hydrogenation of solutions of butadiene rubber at atmospheric pressure and room temperature. I. Preparation of rubbers with different degrees of hydrogenation and a study of their properties. A. I. Yakubchik and G. N. Gromova. *J. Gen. Chem. U.S.S.R.* 26, 1657–64(1956) (English translation).—See *C.A.* 50, 15115i. B. M. R.

Maths

2 May

Category: USSR / Physical Chemistry - Kinetics. Combustion. Explosives. Topochemistry. Catalysis. B-9

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 30066

Author : Yakubchik A. I., Gromova G. N.
Inst : not given
Title : Hydrogenation of Divinyl Rubber Solutions at Atmospheric Pressure and Room Temperature. II. Effect of the Nature of the Solvent on Process of Catalytic Hydrogenation of an Unsaturated Compound over a Palladium on Calcium Carbonate Catalyst.

Orig Pub: Zh. obshch. khimii, 1956, 26, No 6, 1626-1628

Abstract: Hydrogenation of ally. alcohol (I) over a Pd/CaCO catalyst (C) was used to elucidate the effect of the nature of the solvent on rate and extent of hydrogenation. In C_2H_5OH and n-C_4H_9OH (II) I is hydrogenated to the extent of 87%, in iso-C_4H_9OH to 52%, in 2,2-dimethyl-dioxane-1,5 (III) to 65%, in $(C_2H_5)_2O$ to 95%, in benzene no hydrogenation takes place. Hydrogenation of divinyl

Card : 1/2

Category: USSR / Physical Chemistry - Kinetics. Combustion. Explosives. Topochemistry. Catalysis B-9

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 3066

rubber (IV) was carried out over a C in solution of III, and samples of hydrogenated rubber (V) insoluble in III were obtained. Properties of V, obtained over a C in III, are analogous to properties of V previously obtained, with the same C, in II. Selective hydrogenation of external double bonds of IV on hydrogenation in III is more clearly manifested than on hydrogenation in II. Part I, see RZhKhim, 1957, 27071.

Card : 2/2 -29-

Gromova, G.N.

YAKUBCHIK, A.I.; SUBBOTIN, S.A.; GROMOVA, G.N.

Effect of hydrogenation on the characteristics of rubbers.
Kauch. i rez. 16 no.7:12-16 Jl '57. (MIRA 10:10)

1.Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S.V. Lebedeva.
(Rubber) (Hydrogenation)

L 17561-65 EWT(m)/EPF(c)/EWP(j)/EWP(t)/EWP(b) Pc-4/Pr-4 IJP(c)/ASD(p)-3/
ACCESSION NR: AP4049780 RAEM(i) JD/RM S/0138/64/000/011/0001/0004

AUTHOR: Piotrovskiy, K. B.; Gromova, G. N.

TITLE: Passivation of the action of copper and iron compounds during the oxidative destruction of oil-filled, butadiene-styrene rubbers

SOURCE: Kauchuk i rezina, no. 11, 1964, 1-4

TOPIC TAGS: butadiene styrene rubber, oil filled rubber, thermal aging, synthetic rubber, rubber aging, aging catalyst, copper compound, iron compound, antioxidant

ABSTRACT: An investigation was made of the relationship between the content of copper and iron in butadiene-styrene, oil-filled rubber SKS-30 ARKM-27 and its stability. In addition, the amount of deactivator necessary to passivate the catalytic action of the metals was established. The stability of 50-micron-thick rubber films was evaluated from the change in viscosity during the induction period during oxidation with oxygen at 120C and also after different periods of aging in air at 100C. The change in viscosity of the rubber was calculated from

$$K_{ind.} = \frac{\Delta[\eta]}{\tau} \times 10^4$$

where $K_{ind.}$ is the change in viscosity during the induction period of oxidation; $\Delta[\eta]$ is

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L 17561-65

ACCESSION NR: AP4049780

the change in characteristic viscosity at the end of the induction period, and t is the length of the induction period in min. $[\eta]$ was calculated from data on the relative viscosity of a 0.08% benzene solution at 25C from $[\eta] = 2.3 \lg \eta/c$, where η is the relative viscosity of the benzene solution of the rubber and c is the concentration of the polymer in solution. The stability of the rubber was characterized by means of K which is the ratio of the viscosity of the rubber after heating to the viscosity of the original rubber. The stability of the rubber drops sharply with an increase in the copper content to 0.0016%; further increase to 0.01% leads to an insignificant increase in rate of oxidation of the polymer. Iron compounds have a noticeably smaller catalytic action on the oxidation of the polymer. The joint presence of both metals in the polymer increases their separate catalytic action somewhat. The catalytic action of the metals can be passivated by the addition of diphenylparaphenylenediamine, isopropylphenylparaphenylenediamine, parahydroxyphenyl-β-napthylamine or mercaptobenzimidazole in amounts of 0.25-0.50% of the rubber. Orig. art. has: 3 tables, 2 figures and 2 formulas.

ASSOCIATION: Vsesoyuzny*y nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S. V. Lebedeva (All-Union Scientific Research Institute for Synthetic Rubber)

SUBMITTED: 00 ENCL: 00 SUB CODE: MT

NO REF SOV: 001 OTHER: 005

Card 2/2

VINOGRAD, M.I.; GROMOVA, G.P.; Prinimali uchastiye: LIKHNOVA, I.V.; SMIRNOV, Yu.I.; RASKOVA, A.F.; PROSHKINA, M.F.

Investigating inclusions in U10A steel with a varying degree of plasticity. Stal' 22 no.9:842-845 S '62. (MIRA 15:11)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii.

(Steel--Impurities)
(Metals at high temperature)

VINOGRAD, M.I.; GROMOVA, G.P.; RYL'NIKOVA, A.G.; SMIRNOVA, A.V.

Methods of investigating inclusions in smelting baths with varying plasticity at high temperatures. Sbor. trud. TSNIICHM no.24: 261-278 '62. (MIRA 15:6)
(Steel—Inclusions) (Metals at high temperatures)

S/770/62/000/024/003/007
E111/E135

AUTHORS: Vinograd, M.I., and Gromova, G.P.

TITLE: Change in the quantity and nature of inclusions in type 1Х18Н9Т (1Kh18N9T) steel during melting

SOURCE: Moscow. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii. Sbornik trudov, no.24, 1962. Novyye metody ispytaniy metallov. 301-307

TEXT: The quality of type 1Kh18N9T steel improved with oxygen lancing of the bath. There was considerable contamination with titanium-nitride inclusions; therefore an investigation had to be made of the behaviour of inclusions during melting. Melting practice was the normal for this steel. 1-1.5 kg samples were taken at the following stages: after complete melt-down (with oxygen), after oxygen lancing, after addition of first portion of deoxidizing mixture (silicochrome, ferrosilicon, silicocalcium and aluminium), before addition of ferrochrome, after melting of ferrochrome and addition of further portion of deoxidizing mixture, after addition of ferrotitanium and slag mixture with silicocalcium. The inclusion estimation was carried

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Change in the quantity and nature ...

out by a metallographic method using a magnification of x 360. The work showed that after oxygen lancing of the bath nitride inclusions are absent, appearing again after addition of ferrotitanium. Sulphide inclusions vary little during melting, but decrease greatly after addition of ferrotitanium. The nature of the oxide inclusions changes greatly during melting; the chromites and silicates of iron first formed change into glassy silicates after addition of the deoxidizing mixture; some of these then leave the bath whilst the remaining glasses change into titanium oxides.
There are 6 figures and 1 table.

Card 2/2

VINOGRAD, M.I.; GROMOVA, G.P.

Effect of inclusions on the plasticity of steel at high temperatures. Sbor. trud. TSNIICHM no.32:5-21 '63. (MIRA 16:12)

GROMOVA, G.P.; ZHURENKOV, P.M.; LIKHNOVA, I.V.

Revealing the primary structure of steel by the color metallography method. Sbor. trud. TSNIICHM no.32:100-102 '63. (MIRA 16:12)

KOROLEV, N.V.; FAYVILEVICH, G.A.; GROMOVA, G.P.; LEBEDEVA, S.B.

Investigating nonmetallic inclusions by the microspectral method.
Stor. trud. TSNIICHM no.32:138-141 '63. (MIRA 16:12)

L 7036-65 EWT(m)/EWP(q)/EWP(b) Pad AFWL/ASD(m)-3/SSD/RAEM(t) MJW/JD/HW/JG

ACCESSION NR: AP4035088 S/0032/64/000/005/0571/0573

AUTHORS: Smirnova, A. V.; Krasnova, A. K.; Gromova, G. P.; Vinograd, M. I.

TITLE: Electron microscopic investigation of cracks in cast alloy EI437B

SOURCE: Zavodskaya laboratoriya, no. 5, 1964, 571-573

TOPIC TAGS: EI437B cast alloy, KhN77TYuR alloy, phase structure, fractography, surface property, metal grain structure

ABSTRACT: The method used by the authors permits simultaneous study of relief on fractures and the phase composition of particles disposed on the fracture surface. This method, furnishing a single-stage carbon print or film, was described in a previous paper by A. V. Smirnova and G. A. Kokorin (Zavodskaya laboratoriya, XXIV, 12, 1446, 1957). The prints were separated from the cracks by an electrolytic solution of a layer of metal in 10% solution of nitric acid in methyl alcohol, at low current density. This permitted relatively large pieces of the film to be removed, carrying with them segregated particles of the different phases. To remove the particles themselves, the film was washed in 10% H_2SO_4, which dissolved the oxide film as well. The surface structure of the cracks was studied with no additional etching. Samples were broken by the blow of a hammer at room temperature

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L 7036-65

ACCESSION NR: AP4035088

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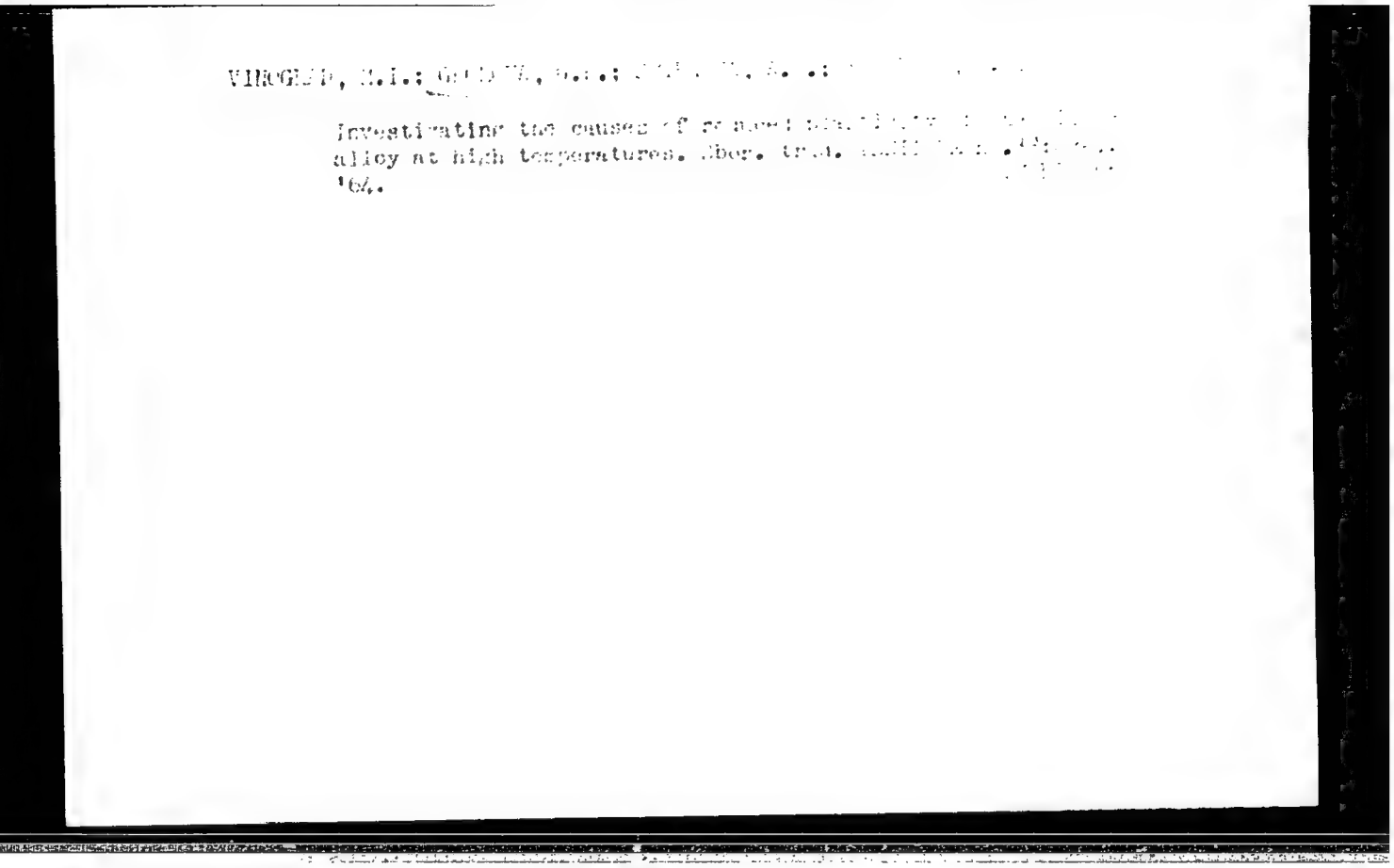
(and also at 1250C) and placed immediately in a vacuum device for plating with the carbon film. For comparison the surface was then etched and studied again. It was found that segregations of chromium boride accumulated at crystal boundaries, especially between dendrite axes. Particles of γ' -phase, $Ni_3(Ti,Al)$ were much less common at the crystal boundaries. Small centers of fracturing were observed about the finely disseminated γ' -phase, and large, greatly extended edges were found in places where single or grouped inclusions of the boride phase were found, or where nonmetallic inclusions were present. Where the primary foci of fracturing were small, the lines of deformation were more nearly rectilinear than where the primary foci were coarse. The nature of the fracturing depends on the nature, size, number, and distribution of excess phases in the alloy. Orig. art. has: 3 figures and 1 table.

ASSOCIATION: Tsentral'ny*y nauchno-issledovatel'skiy institut chernoy metallurgii im. I. P. Bardina (Central Scientific Research Institute of Ferrous Metallurgy)

SUBMITTED: 00 ENCL: 00

SUB CODE: MM NO REF SOV: 004 OTHER: 000

Card 2/2



VIROGLIB, M.I.; [illegible]

Investigating the causes of [illegible] alloy at high temperatures. Zhur. tra[illegible] '64.

VINOGRAD, M.I.; GROMOVA, G.P.; YEGORSHINA, T.V.

Using X-ray microspectroscopy to investigate the composition of nonmetallic inclusions. Sbor. trud. TSNIICHM no.38:112-114 '64. (MIRA 18:3)

L 10150-67 EWT(m)/EWI(w)/EWA(t)/ETI IJP(c) JD/JG

ACC NR: AP6022509 SOURCE CODE: UR/0133/66/000/004/0355/0358

AUTHORS: Vinograd, M. I.; Gnuchev, S. M.; Gromova, G. P.; Smirnova, A. V.; Ryl'nikova, A. G.; Osnovin, V. A.; Krasnova, A. K.; Likhnova, I. V.; Yegorshina, T. V.

ORG: none

TITLE: Nonmetallic inclusions in melts of steel 08Kh20N10G6 exhibiting different hot technological plasticity

SOURCE: Stal', no. 4, 1966, 355-358

TOPIC TAGS: alloy steel, metallurgic research, aluminum, cerium / 08Kh20N10G6 alloy steel

ABSTRACT: The effect of aluminum and rare earth elements (mainly cerium) on the technological plasticity of steel 08Kh20N10G6 was investigated. The investigation supplements the results of V. A. Osnovin and S. M. Gnuchev (Byulleten' TsIINChM, 1964, No. 6). The microstructure and twisting strength of the specimens was determined as a function of the temperature and nature of the reducing agent (see Fig. 1). It was found that addition of 1.5--2.0 kg/ton of Al and rare earth metals (0.15--2.0% on the basis of Ce) to steel 08Kh20N10G6 leads to a considerable increase in the high temperature plasticity of the latter. S. B. Lebedeva, I. A. Prokof'yeva, and L. I. Volkova participated in the experimental work.

UDC: 669.15:658.562

Card 1/2

L 10450-67

ACC NR: AP6022509

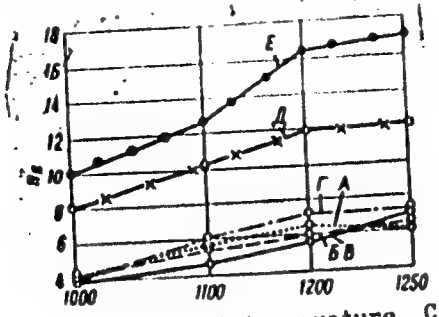


Fig. 1. Results of torsion tests at high temperatures (n_k - number of revolutions at which failure occurred) of different melts A - E. Specimen A reduced in the usual way. All others reduced as described above.

Orig. art. has: 1 graph and 6 photographs.

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 009

GROMOVA, G. V. Cand Med Sci -- (diss) "Certain problems of the hemodynamics of the lesser circulation studied during catheterization of patients with chronic suppurative processes in the lungs and ~~those affected~~ with mitral ~~stenosis~~." Mos, 1959. 15 pp including cover (First Mos Order of Lenin Med Inst im I. M. Sechenov), 200 copies (KL, 50-59, 129)

MURAV'YEV, M.V.; ZLOCHEVSKIY, P.M.; GROMOVA, O.V.

Electrocardiographic data on functional changes of the heart during catheterization of the right heart and the pulmonary artery. Terap. arkh. 31 no.2:22-29 F '59. (MIRA 12:1)

1. Iz kafedry obshchey khirurgii (zav. - prof. V.I. Struchkov) lechebnogo fakul'teta i filiala (rukovoditel' - prof. B.B. Kogan) kafedry gospital'noy terapii (zav. - deystvitel'nyy chlen AMN SSSR prof. A.L. Myasnikov) I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M. Sechenova na baze klinicheskoy bol'nitsy No.23 imeni Medsantrud.

(CATHETERIZATION, CARDIAC,
right heart & pulm. artery, ECG changes (Rus))
(ECG,
in catheterization of right heart & pulm. artery (Rus))

MURAV'YEV, M.V.; RYZHKOV, Ye.V.; GROMOVA, G.V. (Moskva)

Certain aspects of pulmonary circulation in chronic suppurative processes in the lungs. Klin.med. 38 no.10:97-105 O '60.
(MIRA 13:11)

1. Iz kafedry obshchey khirurgii (zav. - prof. V.I. Struchkov) lechebnogo fakul'teta I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M. Sechenova i morfologicheskoy laboratorii Deystvitel'nogo chlena AMN SSSR I.V. Davydovskogo na baze klinicheskoy bol'nitsy No.23 imeni Medsantrud (glavnyy vrach A.P. Timofeyeva).
(PULMONARY ARTERY) (LUNGS--DISEASES)

MURAV'YEV, M.V.; GROMOVA, G.V.; VOL'-EPSHTEYN, G.L.

Some data on pulmonary circulation changes in chronic suppurative processes in the lung. Grud. khir. 3 no.2:68-72 '61. (MIRA 14:4)

(LUNGS—DISEASES) (PULMONARY ARTERY)

GROMOVA, G.V.

Nature of the change in pressure of the lesser blood circulation in patients with chronic suppurative processes in the lungs. Khirurgiia 37 no.1:75-81 Ja '61. (MIRA 14:2)

1. Iz kafedry obshchey khirurgii (zav. - prof. V.I. Struchkov) lechebnogo fakul'teta I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M. Sechenova.
(LUNGS—DISEASES) (BLOOD PRESSURE)

GLUSKER, R.V.; GROMOVA, I.I.

Clinicopathoanatomical characteristics of a case of strongyloidosis. Med.paraz. i paraz.bol. 25 no.4:305-308 O-D '56. (MLRA 10:1)

1. Iz terapevticheskogo otdeleniya (zav. Ye.S.Brusilovskiy) i patologo-anatomicheskogo otdeleniya (zav. M.V.Aref'yeva, konsul'tant - prof. M.K.Dal') Dorozhnoy bol'nitsy No. 2 Yugo-zapadnoy zheleznoi dorogi (nachal'nik bol'nitsy G.I.Zubkov)

(STRONGYLOIDIASIS, case reports, clin. aspects & histopathol. (Rus))

YAKOVLEVA,A.V.; GROMOVA,I.I.; PROTAS,I.R.

A vacuum fluorite spectrograph, photographic material for it and some data on investigations. Izv. AN SSSR. Ser. fiz. 19 no.1:84-86 Ja-F '55. (MLRA 8:9)
(Spectrum analysis) (Spectrometer)

USSR / Physical Chemistry. Molecule. Chemical Bond. B-4

Abs Jour : Ref Zhur - Khimiya, No 8, 1957, 25750

Author : I.I. Gromova
Title : To The Question of Photodissociation of Nitrogen.

Orig Pub : Optika i spektroskopiya, 1956, 1, No 3, 433-434.

Abstract : The curves of potential energy at the states $K\,^1\Sigma_g^+$, $a\,^1\Pi_g$, $A\,^3\Sigma_u^+$, $B\,^3\Pi_g$, and $C\,^3\Pi_u$ of the N_2 molecule, the dissociation energy of which had been assumed to be equal to 9,764 ev, were plotted with Goulbert-Hirschfelder approximation. It was found that the curve of $A\,^3\Sigma_u^+$ state crossed the curves $a\,^1\Pi_g$, $B\,^3\Pi_g$ and $C\,^3\Pi_g$, and that the crossing of the state $a\,^1\Pi_g$ took place between the fifth and sixth vibrating levels at the place coinciding with the dissociation level of $A\,^3\Sigma_u^+$ state. This result agrees with theoretical forecasts (Geydon A. Dissociation Energy and Spectra of Diatomic Molecules 1949), as well as with experimental data (Douglas A., Herzberg G., Canad. J.

Card : 1/2 - 10 -

USSR / Physical Chemistry. Molecule. Chemical Bond. B-4

Abs Jour : Ref Zhur - Khimiya, No 8, 1957, 25750

Abstract : Phys., 1951, 29, 294). It is supposed that molecules of N_2 getting into the region of curve crossing on a' Π_u levels at the absorption will be dissociated along $A^3\Sigma_u^+$ curve into two normal atoms of N in 4S state.

Card : 2/2 - 11 -

GROMOVA, I. I.

PRIKHOT'KO, A F

24(7) PHASE I BOOK EXPLOITATION SOV/1365

L'vov. Universytet

Materialy X Vsesoyuznogo soveshchaniya po spektroskopii. t. 1: Molekulyarnaya spektroskopiya (Papers of the 10th All-Union Conference on Spectroscopy. Vol. 1: Molecular Spectroscopy) [L'vov] Izd-vo L'vovskogo univ-ta, 1957. 499 p. 4,000 copies printed. (Series: Its: Fizychnyy zbirnyk, vyp. 3/8/)

Additional Sponsoring Agency: Akademiya nauk SSSR. Komissiya po spektroskopii. Ed.: Lazer, S.L.; Tech. Ed.: Saranyuk, T.V.; Editorial Board: Lavinterg, G.S., Academician (Resp. Ed., Deceased), Neporent, B.S., Doctor of Physical and Mathematical Sciences, Fabelinskiy, I.L., Doctor of Physical and Mathematical Sciences, Fabrikant, V.A., Doctor of Physical and Mathematical Sciences, Kornitskiy, V.G., Candidate of Technical Sciences, Rayskiy, S.M., Candidate of Physical and Mathematical Sciences, Klimovskiy, L.K., Candidate of Physical and Mathematical Sciences, Miliyanchuk, V.S., Candidate of Physical and Mathematical Sciences, and Glauberman, A. Ye., Candidate of Physical and Mathematical Sciences.

Card 1/30

AUTHOR: Gromova, I.I.

51-4-5-21/29

TITLE: New Lines in the Mo II Spectrum (Novyye linii v spektre Mo II)

PERIODICAL: Optika i Spektroskopiya, 1958, Vol IV, Nr 5, pp 687-689 (USSR)

ABSTRACT: A group of lines in the region 1700-1750 Å was observed in the spectrum excited in a hollow cathode made from Mo sheet (Ref 1). These lines were ascribed to ionized Mo. This spectrum was recorded using a vacuum spectrograph with a diffraction grating of 1 m radius. The linear dispersion was 7.36 Å/mm. Carbon and aluminium lines at 1560, 1656 and 1854 Å were used as standards. The Mo lines reported on in the present paper could be excited only in pure argon (3 mm Hg pressure, 0.20-0.25 A current, 180-200 V voltage). If argon is replaced by helium or if argon contains some hydrogen or nitrogen these lines disappear. It is suggested that the 1700-1750 Å group of lines of Mo II are due to charge-exchange in collisions of Mo atoms with argon ions. The wavelengths and intensities of

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22 lines observed are given in Table 1, where the last column gives Lang's wavelengths (Ref 3). Interpretation of these lines is given in Tables 2-4. The author thanks V.K. Prokof'yev and A.V. Yakovleva for their criticism. There are 4 tables and 7 references, 4 of which are American, 1 Soviet, 1 English and 1 translation of Western work into Russian.

ASSOCIATION: Gosudarstvennyy opticheskiy institut im. S.I. Vavilova (State Optical Institute imeni S.I. Vavilov)

SUBMITTED: October 2, 1957

Card 2/2

1. Argon - Application 2. Atoms - Collision
3. Ions - Collision

SOV/51-7-1-25/27

24(4)

AUTHORS: Gromova, I.I. and Kulikov, S.A.

TITLE: Effect of the Current Strength on the Intensity of the Hydrogen Spectrum in the Region 2500-1200 Å (Vliyaniye sily toka na intensivnost' vodorodnogo spektra v oblasti 2500-1200 Å)

PERIODICAL: Optika i spektroskopiya, 1959, Vol 7, Nr 1, pp 130-131 (USSR)

ABSTRACT: The intensity of emission by various hydrogen lamps was measured by means of a vacuum monochromator SF-18. A photomultiplier FEU-19 was used as the receiver and the photomultiplier current was amplified and measured with a microammeter. These measurements were made on 350-400 W high-voltage water-cooled hydrogen lamps with and without a window of lithium fluoride. These lamps had capillaries of 4 mm diameter and 100 mm length filled with hydrogen at 3-4 mm Hg pressure in the case of closed lamps and 2-2.5 mm Hg in the case of lamps without windows. The current strength was varied from 0.02 to 0.4 A. In the lamp without a window the emission intensity was measured for wavelengths from 1216 to 2558 Å and the results are shown in Fig 1. It can be seen in Fig 1 that only the intensity of emission at 1216 Å (atomic hydrogen line L_{α}) is a linear function of the current strength; the remaining curves are sublinear. Similar results were obtained for the

Card 1/2

Effect of the Current Strength on the Intensity of the Hydrogen Spectrum in the Region 2500-1200 Å

lamp with a window of lithium fluoride (Fig 2). Intensity measurements were also made on a low-voltage hydrogen lamp (DI). This lamp was a point source, it had an oxide cathode and it worked without any cooling. Its power was of the order of 300 W. The current strength was varied from 2.6 to 5 A. The results of measurements between 1250 and 2558 Å are shown in Fig 3; all curves are sublinear. The emission intensity of the high-voltage lamp with a lithium fluoride window was found to be practically independent of hydrogen pressure between zero and 50 mm Hg (Fig 4). There are 4 figures and 3 references, 1 of which is Soviet, 1 English and 1 German.

SUBMITTED: February 5, 1959

Card 2/2

33161
S/120/61/000/006/035/041
E194/E485

24.5600

AUTHORS: Goncharov, I.N., Gromova, I.I., Neganov, B.S., Parfenov, L.B.

TITLE: An electromagnet with super conducting winding

PERIODICAL: Pribory i tekhnika eksperimenta, no.6, 1961, 142-143

TEXT: The magnet described was required to control the "thermal keys" in a cyclic refrigerator equipment used to produce extremely low temperatures by the adiabatic demagnetization of a paramagnetic salt. The coil was made of lead, which has a critical field of about 500 oersteds at a temperature of 4.2°K and 800 oersteds at 1.5°K, the critical current for the wire of section 0.5 x 1.5 mm was not less than 10 A at 4.2°K. The turns were insulated with capacitor paper treated with adhesive grade БФ-2 (BF-2). For convenience of accommodating the "thermal key" between the poles, the magnet was made cylindrical, the pole diameter was 8 mm and the pole tip diameter 14 mm, the gap length was 3.2 mm. For example, with 700 turns the field strength at which super-conductivity broke down to give a p.d. of 0.05 mV was 2800 oersteds at 1.5°K with a critical current of 1.2 A. As the

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An electromagnet with super ...

current is required to flow for several hours, heat evolved in the connections is troublesome and so a circuit was devised to maintain the gap field constant with supply disconnected. The coil was shorted by turns of lead, wound on a metal core in contact with liquid helium, on which a heating coil was also wound. Until the heater was switched on, the lead turns were superconducting and current continued to flow through the magnet coil even with supply switched off. If it is required to connect the supply, it is first switched on then, as the heater current is increased, the lead coil becomes progressively less super-conducting and supply voltage is applied to the magnet coil. Acknowledgments are expressed to V.M.Drobin for assistance. There are 3 figures and 3 references: 1 Soviet-bloc and 2 non-Soviet-bloc. The two references to English language publications read as follows:
Ref.1: S.H.Autler, Rev. Scient. Instrum. v.31, 1960, 369;
Ref.2: D.R.Young, Progress in Cryogenics, v.1, 1959, 3.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy
(Joint Institute for Nuclear Research)

SUBMITTED: April 3, 1961
Card 2/2

L 18137-63 EWT(1)/BDS/ES(w)-2 AFFTC/ASD/ESD-3/APGC/IJP(C)/SSD
P1-4/Po-4/Pab-4/Pq-4 GW
ACCESSION NR: AP3004509 S/0048/63/027/008/1097/1101

79
78

AUTHOR: Gromova, I.I.; Yakovleva, A.V.

TITLE: Step excitation and ionization of nitrogen /Report presented at the Second All-Union Conference on the Physics of Electronic and Atomic Collisions held in Uzhgorod 2-9 Oct 1962/

SOURCE: AN SSSR, Izvestiya, ser.fiz.,v.27, no.8, 1963, 1097-1101

TOPIC TAGS: fluorescence, N, atmospheric optics

ABSTRACT: As was shown earlier (A.V.Yakovleva, Phys.Z.USSR,9,547,1936 and Izv.AN SSSR,4,59,1940, and I.I.Gromova and A.V.Yakovleva, Materialy* X soveshchaniya po spektroskopii,1,308,1957), UV irradiation of nitrogen by the light of hydrogen discharge tube gives rise to fluorescence which consists of the bands due to the molecular ion ($B^2\Sigma_u^+ \rightarrow X^2\Sigma_g^+$) and bands of the second positive system ($C^3\pi_u \rightarrow B^3\pi$); in both cases the highest intensity is exhibited by the 0'0" band. Excitation of the $C^3\pi_u$ level requires 11 eV; ionization and excitation to the $B^2\Sigma_u^+$ level requires an energy of 18.7 eV, yet the supplied energy does not exceed 9.7 eV, which indicates that a step excitation mechanism must be involved. In view of the fact that inter-

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action of nitrogen with short wavelength radiation is of interest from the standpoint of high-altitude atmospheric physics, it was deemed desirable to investigate the fluorescence of nitrogen at low pressures (0.1 to 3 mm Hg) and with variation in pressure (0.005 mm Hg to 1 atm). The radiation source in the experiments was a hydrogen tube with a fluorite window transparent to 1250 Å. Tubes of this type yield a multiple H_2 line spectrum in the 1200 to 2670 Å region. The fluorescence was excited in a glass vessel to which the tube was optically coupled and photographed or detected by a photomultiplier, directly or via a spectrograph, at right angles to the direction of the incident radiation. Under the given experimental conditions it was impossible to eliminate all oxygen from the vessel in order to exclude its influence on the fluorescence. The luminescence intensity in a vessel with the valve to the vacuum system closed remains constant only in the case of a weak excitation; at higher intensities the luminescence builds up to a maximum with time. At very low pressures the ion bands predominate, but with increasing pressure are quickly quenched. The bands of the second positive group appear at about 0.03 mm Hg and exhibit two maxima with increasing pressure (one at 0.2, the other at 3-10 mm Hg). The variation in intensity of fluorescence with the excitation intensity (tube current) exhibits a square-law increase with increasing excitation intensity, but the curve obtained for decreasing intensity differs radically from

L 18137-63
ACCESSION NR: AP3004509

the initial curve (see Figure in the Enclosure). This anomalous behavior is tentatively attributed to formation of metastable molecules on the walls of the vessel. Orig.art.has: 4 figures.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 26Aug63 ENCL: 01

SUB CODE: PH, AS NO REF SOV: 004 OTHER: 008

Card 3/4

L 25389-65 EWT(m) IJP(c)

ACCESSION NR: AP5002144 S/0120/64/000/006/0039/0044

AUTHOR: Gromova, I. I.; Legar, F.; Nikanorov, V. I.; Peter, G.; Pisarev, A. F.

19 B

TITLE: Characteristics of a multilayer spark-discharge chamber with various filling gases

SOURCE: Pribory i tekhnika eksperimenta, no. 6, 1964, 39-44

TOPIC TAGS: spark discharge chamber, multilayer spark chamber

ABSTRACT: The results of an experimental investigation of the characteristics of a 27-electrode spark chamber filled with Ne+0.4%A or He or Ne+20%He are reported. The effects of the clearing field, pulse delay, gas pressure, and gas type upon the efficiency of recording charged particles were studied. It was found that the efficiency vs. pulse-delay curves have no gradually falling-off "tails." The curves for Ne+0.4%A and Ne+20%He drop steeply, which fact is favorable

Card 1/2

L 25389-65

ACCESSION NR: AP5002144

for using these gas mixtures in the chambers operating with high background noise. The storage-time vs. clearing-field curves have a minimum at 0.3—0.4 microsec. An increase in the efficiency and storage time with increasing the clearing-field amplitude is most probably due to metastable states of basic-gas atoms which are formed by the drift energy of initial electrons in the clearing field. The spark chambers can operate efficiently at low gas pressures. The plateau length for the above gases is about 7—8 kv. Orig. art. has: 7 figures.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Nuclear Research Institute)

SUBMITTED: 03Oct63 ENCL: 00 SUB CODE: NP

NO REF SOV: 003 OTHER: 002

Card 2/2

L 49017-65 EWT(1) Pi-4 IJP(c)

ACCESSION NR: AR5012281 UR/0058/65/000/003/D066/D066

SOURCE: Ref. zh. Fizika, Abs. 3D534

AUTHOR: Yakovleva, A. V.; Gromova, I. I.

13
B

TITLE: Wall fluorescence during recombination of nitrogen atoms

CITED SOURCE: Tr. Komis. po spektroskopii. AN SSSR, vyp. 1, 1964, 591-596

TOPIC TAGS: nitrogen atom recombination, nitrogen fluorenscence, metastable nitrogen molecule

TRANSLATION: Hydrogen lamp lumination of nitrogen through a fluorite window results in fluorescence, consisting of primary negative and secondary positive systems. The energy input is insufficient for direct excitation of nitrogen at these levels. Tests showed that one of the elements of fluorescence excitation is atomic nitrogen which recombines on the wall with creation of metastable molecules in the state $^5\Sigma_g^+$. After prolonged lumination of the vessel its walls lose the property to give off metastable molecules and fluorescence decays. Thus, there is bright wall fluorescence in the form of continuous radiation with a maximum near the red hydrogen line. In the background of this fluorescence an absorption

Card 1/2

L 49017-65

ACCESSION NR: AR5012281 O

spectrum is observed which consists of narrow bands of various widths and intensities, without clear conformities corresponding to a molecular series. The spectrum carrier was not established.

SUB CODE: OP ENCL: 00

Card 2/2

L 47080-65 EWT(m) IJP(c)

ACCESSION NR: AP5007026 S/0120/65/000/001/0064/0068 14

AUTHOR: Gromova, I. I.; Nikanorov, V. I.; Peter, G.; Pisarev, A. F. 12 B

TITLE: Investigation of the characteristics of discharge chambers filled with neon with various additions 19

SOURCE: Pribory i tekhnika eksperimenta, no. 1, 1965, 64-68

TOPIC TAGS: discharge chamber, spark discharge chamber

ABSTRACT: Six 25x10x7-cm glass chambers with thin semitransparent stannic-oxide electrodes were tested. They were filled at 760 torr with neon with admixtures of A, H_2O, C_2H_5OH, CH_4, and CCl_4. For the first experiment, all six chambers were filled with a standard mixture of 99.6% Ne and 0.4% A; their memory time was 16 μsec. One of the chambers was left intact for 2 yrs, whereupon it was tested again: its memory time decreased to 5 μ sec, while its maximum angle of slope of discharge and the quality of tracks remained

Card 1/2

L 47080-65

ACCESSION NR: AP5007026

2

unchanged. Another chamber was used for studying the diffusion of initial electrons from the particle track. The remaining four chambers were used for investigating the effects of the above additions to the standard mixture. It was found that the introduction of 0.1% CH_4 results in a memory-time reduction from 16 to 1 μsec; an addition of 3×10^{-6} % CCl_4, from 16 to 1.6 μsec. The addition of H_2O and C_2H_5OH does not improve the time characteristics. "The authors wish to thank A. A. Tyapkin for his useful advice and discussions about the development of discharge along the particle track." Orig. art. has: 3 figures and 1 table.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Nuclear Research Institute)

SUBMITTED: 30Dec63 ENCL: 00 SUB CODE: NP

NO REF SOV: 003 OTHER: 003

bjo

Card 2/2

L 45794-66 EWT(1)

ACC NR: AP6030148 SOURCE CODE: UR/0120/66/000/004/0157/0160

AUTHOR: Gromova, I. I.; Peter, G.; Pisarev, A. F. 43

ORG: Joint Nuclear Research Institute, Dubna (Ob"yedinennyy institut yadernykh issledovaniy) 42 B

TITLE: Testing the models of gas-discharge image converters 25

SOURCE: Pribory i tekhnika eksperimenta, no. 4, 1966, 157-160

TOPIC TAGS: image converter, gas discharge

ABSTRACT: A principle of operation of a new gas-discharge image-converter tube was suggested by the authors in PTE, 1963, no. 4, 128. The present article reports the results of some studies of the sensitivity and operability of the photocathode in the presence of gas, of the passage of electrons through the metal screen, and of the definition of reproduced image. Plots of photocurrent vs. voltage for various neon pressures and of photocurrent vs. neon pressure show that the tube has acceptable sensitivity only at gas pressures under 1.3 kn/m^2. Satisfactory grid through factor was obtained with a large-mesh grid in a tube filled with neon at 0.7 kn/m^2 or lower pressure. Further experiments revealed that a single-stage tube cannot handle the spark-type image because of undesirable optical feedback. Models of two-stage tubes produced a visual slit image, whose intensity, however, was not

Card 1/2 UDC: 621.383.001.4:621.383.6

L 45794-66

ACC NR: AP6030148

sufficient for photographing. Hints for improving the tube performance are given. "In conclusion, the authors wish to thank A. G. Nikolayev for his help in building the tube models." Orig. art. has: 5 figures. [03]

SUB CODE: 09 / SUBM DATE: 20Jul65 / ORIG REF: 004 / OTH REF: 001/ ATD PRESS: 5085

pb

Card 2/2

ACC NR: AP6029018 SOURCE CODE: UR/0413/66/000/014/0021/0021

INVENTOR: Chalykh, S. N.; Kafarov, V. V.; Vigdorov, A. S.; Savost'yanov, N. I.; Gromova, I. I.; Podgorbunskikh, M. T.; Kolesnikov, A. S.; Luferov, V. Ye.

ORG: none

TITLE: Preparation of salts of dithiocarbamic acid derivatives. Class 12, No. 183735. [announced by Scientific Research Institute of Organic Intermediates and Dyestuffs (Nauchno-issledovatel'skiy institut organicheskikh poluproduktov i krasiteley)]

SOURCE: Izobret prom obraz tov zn, no. 14, 1966, 21

TOPIC TAGS: sodium dithiocarbamate, alkyl dithiocarbamate, dialkyl dithiocarbamate, carbamic acid, organic salt

ABSTRACT: Usually, salts of dithiocarbamic acid derivatives of the general formula:
(where R_1 and R_2 are CH_3 or C_2H_5; Me is Na) are obtained by the reaction of carbon disulfide with a solution of an amine in the presence of alkalies. To improve the technological process and to increase the yield and quality of the final product, the process is carried out in dilute solutions of amines with a 5% excess of CS_2

Card 1/2 UDC: 547.496.2.07

ACC NR: AP6029018

at 25—45°C in the presence of surfactants with subsequent removal of CS_2 in vacuo (350 mm Hg). [WA-50; CBE No. 11]

SUB CODE: 07/ SUBM DATE: 21Jun65/

Card 2/2

GROMOVA, I.S.; YUSTOVA, Ye.N.

Production of a glass colophony scale. Trudy Inst.Kom.stand., mer i izm.prib. no.56:106-112 '61. (MIRA 15:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii im. D.I.Mendeleyeva.
(Photometry)

DEMIKHOVSKAYA, S.Z.; VODZINSKIY, Yu.V.; YUSTOVA, Ye.N.; GROMOVA, I.S.; POKROVSKAYA, G.V.

Standard specimens of the color of rosin. Gidrolis. i lesokhim. prom. 16 no.2:8-10 '63. (MIRA 16:6)

1. TSentral'nyy nauchno-issledovatel'skiy i proyektnyy institut lesokhimicheskoy promyshlennosti (for Demikhovskaya, Vodzinskiy). 2. Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii im. Mendeleyeva (for Yustova, Gromova, Pokrovskaya).
(Gums and resins—Grading)
(Color)

ZELENETSKIY, V.Yo. [Zelenets'kyi, V.IE.]; GROMOVA, I.S. [Hromova, I.S.]

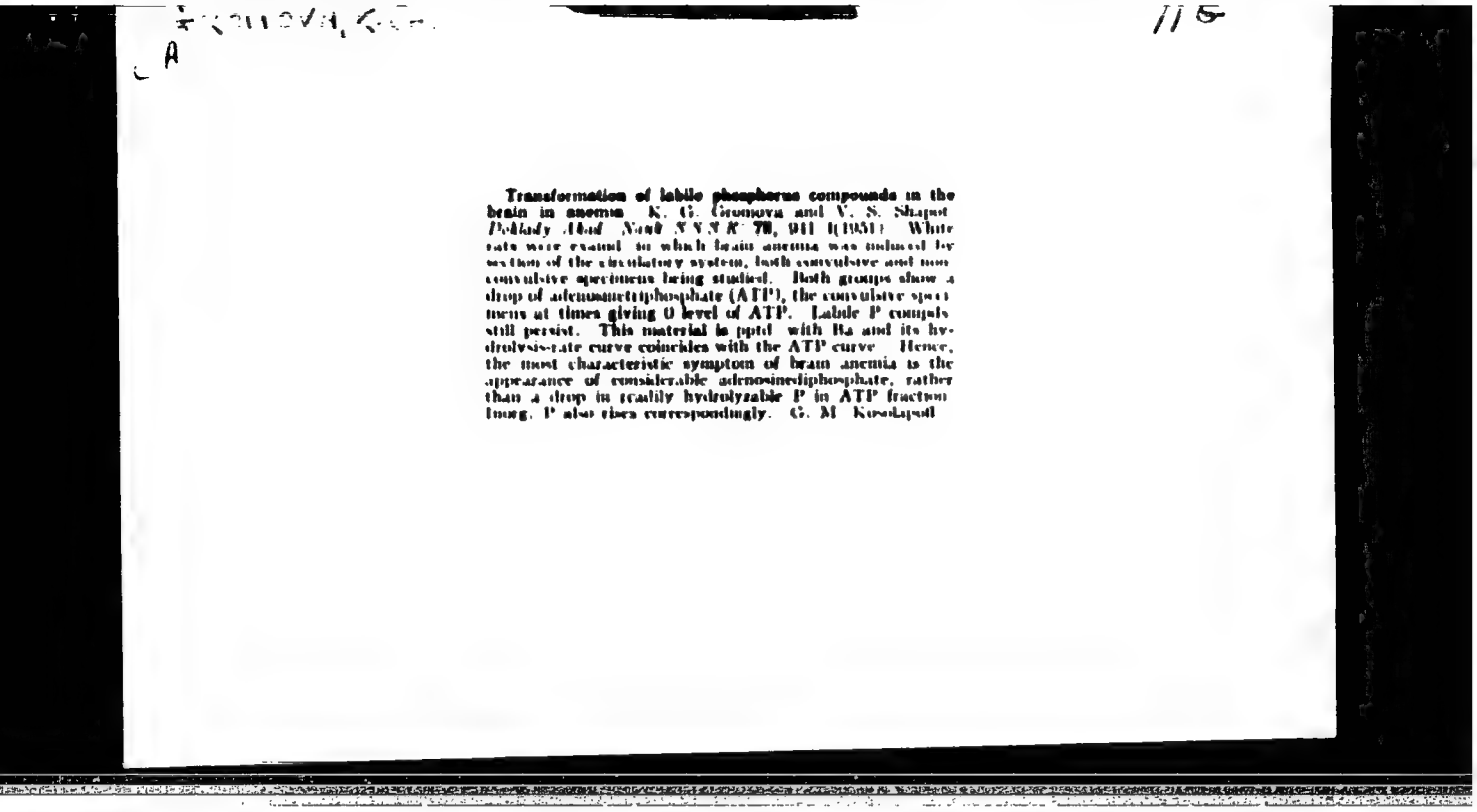
Rare case of lymphogranulomatosis of the heart in an eight-year-old child. Ped. Akush. i gin. 24 no.6:30-31 '62. (MIRA 17:4)

1. Kafedra podiatrii vrachebnogo i sanitarno-gigiyenicheskogo fakul'tetov (zaveduyushchiy - prof. R.Yu. Kol'ner) Kiyevskogo meditsinskogo instituta (rektor - dotsent V.D. Bratus') na baze Pervoy zheleznodorozhnoy bol'nitsy Yugo-Zapadnoy zheleznoy dorogi (nachal'nik - Z.Z. Bokhanovich [Bokhanovych, Z.Z.]).

GROMOVA, K.G.; IL'IN, V.S.

Identification of glucokinase in the adipose tissue of the epididymis of rat testicle and the stimulating effect of insulin on its synthesis. Biokhimiia 30 no.4:752-758 Jl-Ag '65. (MIRA 18.8)

1. Otdel biokhimii Instituta eksperimental'noy meditsiny AMN SSSR, Leningrad.

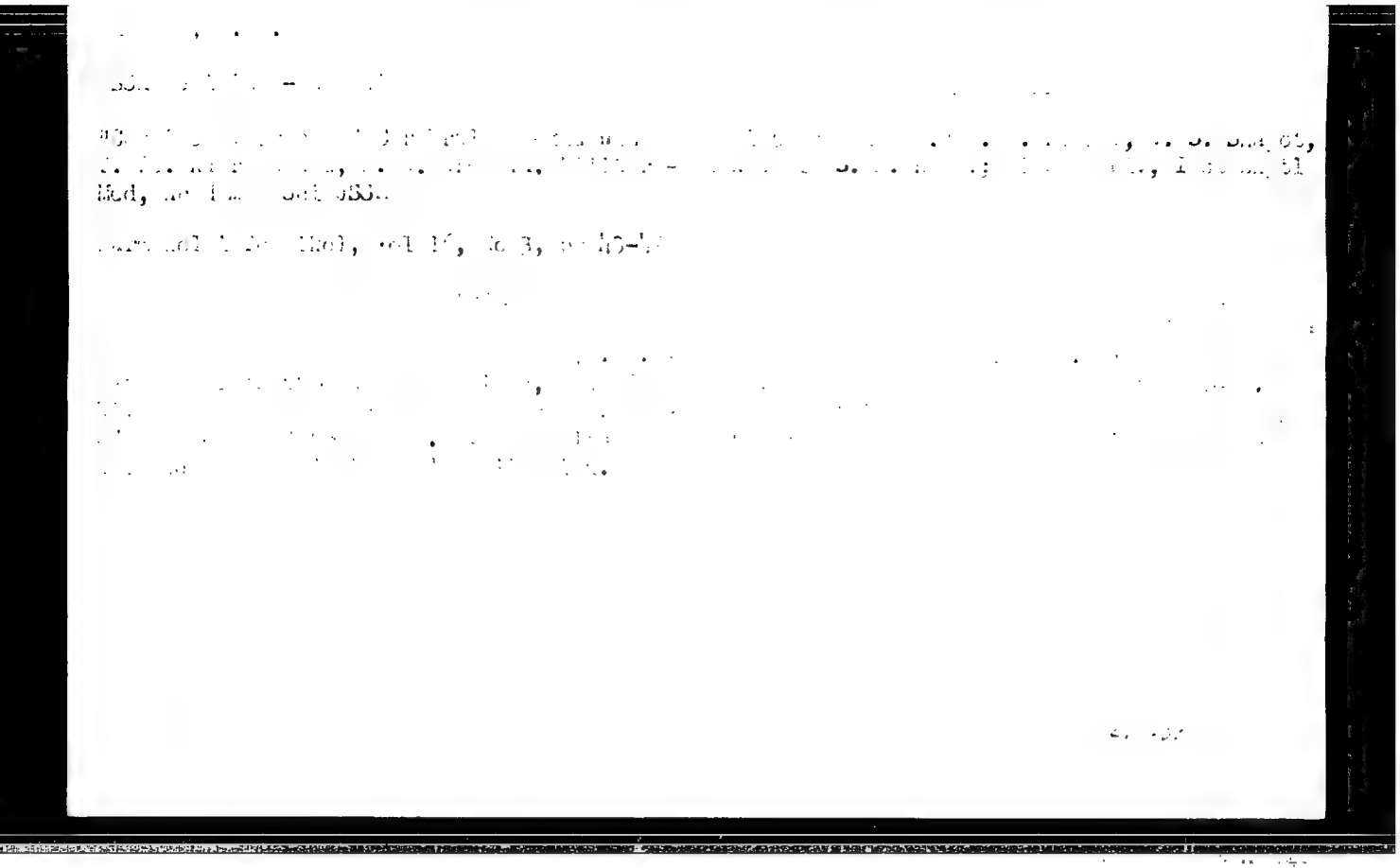


Transformation of labile phosphorus compounds in the brain in anemia. K. G. Gromova and V. S. Shapot. *Doklady Akad. Nauk S.S.S.R.* 79, 911 (1951). White rats were exsanguinated in which brain anemia was induced by section of the circulatory system, both convulsive and non-convulsive specimens being studied. Both groups show a drop of adenosinetriphosphate (ATP), the convulsive specimens at times giving 0 level of ATP. Labile P compds still persist. This material is ppted with Ba and its hydrolysis-rate curve coincides with the ATP curve. Hence, the most characteristic symptom of brain anemia is the appearance of considerable adenosinediphosphate, rather than a drop in readily hydrolyzable P in ATP fraction. Inorg. P also rises correspondingly. G. M. Kosolapoff

OROMOVA, K.O.; KUBRITSKAYA, T.Ye.; PETROV, I.R.; SHAPOT, V.S.

Metabolism of labile phosphorus compounds in the brain in cerebral anemia during protective inhibition. Biokhimiia, Moskva 17 no.1:13-24 Jan-Feb 1952. (CLML 24:5)

1. Department of Biochemistry, Institute of Experimental Medicine of the Academy of Medical Sciences USSR, Leningrad.



SHAPOT, V.S.; PETROV, I.R.; OKOMOVA, K.G.; KUDRITSKAYA, T.Ye.

Role of irritation of the central nervous system in the increase of sensitivity of the organism to anoxia. Fiziol. zh. SSSR 39 no.5:614-617 Sept-Oct 1953. (CIML 25:4)

1. Department of Biochemistry of the Institute of Experimental Medicine of the Academy of Medical Sciences USSR and the Department of Pathophysiology of Military Medical Academy imeni S. M. Kirov, Leningrad.

GROMOVA, K. G.

Dissertation: "Metabolism of Phosphorus Compounds in the Brain in the Presence of Anemia of the Brain." Cand Biol Sci, Inst of Experimental Medicine, Acad Med Sci USSR, Leningrad, 1954. (Referativnyy Zhurnal--Khimiya, Moscow, No 10, May 54)

SO: SUM 318, 23 Dec 1954

GROMOVA, K.G.

The effect of the functional state of the central nervous system on the metabolism of phosphorus-containing compounds of the brain. K. G. Gromova (Inst. Exptl. Med., Acad. Med. Sci. U.S.S.R., Leningrad). *Biokhimiya* 19, 469-77(1954).—Partial anemia of the brain in white rats was brought about by tieing both common carotids. No narcosis was used during the operation. The brain tissue was frozen *in situ* with the cranium intact, the heart beats continuing to the time of complete brain freezing. Removed frozen brain was ground to a powder in liquid air and suspended in trichloroacetic acid at 0°. Further exptl. procedures are described in detail. The functional state of the central nervous system of the animal affects the rate of development and degree of disturbances in the metabolism of the brain compds. rich in P. It was possible to change the type of reaction induced by exptl. anemia by influencing the functional state of the central nervous system. Shifts in the metabolic and pathologic processes become ameliorated in the "convulsion" group of rats by injecting sleep-inducing doses of urethan as soon as the first signs of convulsion appear; in the "non-convulsion" group of animals it was possible to bring about an increase in the shift in the metabolic and pathol. processes by supplementary elec. stimulation.

B. S. Levine

USSR / Human and Animal Physiology. Metabolism. T

Abs Jour: Ref Zhur-Biol., No 9, 1958, 41020.

Author : Gromova, K. G.
Inst : Institute of Experimental Medicine. Academy of Medical Sciences USSR, Leningrad.
Title : Changes of ATP Acid Content in the Organs of the Starving Organism.

Orig Pub: Yezhegodnik. In-t eksperim. med. Akad. med. nauk SSSR, 1955, L., 1956, 205-206.

Abstract: The true ATP content of extracts of the liver, kidneys and myocardium of normally fed and starved rats and rabbits, as determined by the fermentation method, constituted from 51-63% of the total labile

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USSR / Human and Animal Physiology. Metabolism. I

Abs Jour: Ref Zhur-Biol., No 9, 1958, 41020.

Abstract: tissue phosphate, determined by the chemical method. In rats, after a 3-4 day fast, true ATP decreased by 47% only in the liver, but remained unchanged in the myocardium and kidneys. In rabbits, after 10-12 days of fasting, ATP decreased slightly in all the investigated tissues and the value of labile phosphate remained unchanged. It is the opinion of the author that the lower ATP values in the liver of starving rats is related to the decrease in the liver of the intensity of oxidative phosphorylation.
-- A. A. Titayev.

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GROMOVA, K.G.

GROMOVA, K.G.

Components of the adenylic system and creatine phosphate in organs of starved rabbits and rats. Vop.med.khim. 3 no.2:129-136 Mr-Ap '57. (MLRA 10:7)

1. Otdel biokhimii Institute eksperimental'noy meditsiny AMN SSSR, Leningrad.

(ADENYLPYROPHOSPHATE
eff. of starvation on content in various organs of exper. animals (Rus))
(NUCLEOTIDES
adenosine diphosphate, eff. of starvation on content in various organs of exper. animals (Rus))
(COENZYMES
phosphocreatine, eff. of starvation on content in various organs of exper. animals (Rus))
(STARVATION, exper.
eff. on adenosine diphosphate, adenylpyrophosphate & phosphocreatine content in various organs of exper. animals (Rus))

GROMOVA, K.G.; Primimula ochraliye [illegible]

Effect of insulin on glucose and [illegible] fat tissue of the epididymis of normal rats, adrenal [illegible] rats with alloxan diabetes. Biokhimiia [illegible] '62. (MIRA 15:9)

1. Otdel biokhimii Instituta eksperimental'noy [illegible], Leningrad.

GROMOVA, K.G.

Fructokinase in the adipose tissue of the epididymis of rats. Dokl. AN SSSR 153 no.5:1207-1209 D '63.
(MIRA 17:1)

1. Institut eksperimental'noy meditsiny AMN SSSR. Predstavleno akademikom V.N. Chernigovskim.

GROMOVA, K.G.

Hexokinase and glucokinase activity in the adipose tissue of the epididymis of rats and its regulation with insulin. Vop. med. khim. 10 no.6:631-633 N-D '64. (MIRA 19:1)

1. Institut eksperimental'noy meditsiny AMN SSSR, otdel biokhimii, Moskva.

GROMOVA, K.G.; SOLITERNOVA, I.B.

Absorption of glucose, 2-deoxyglucose and L-arabinose by the adipose tissue of the rat epididymis in the presence of insulin and N-ethylmaleimide. Biokhimiia 30 no.6:1142-1146 N-D '65. (MIRA 19:1)

1. Otdel biokhimii Instituta eksperimental'noy meditsiny AMN SSSR, Leningrad. Submitted November 27, 1964.

GROMOVA, K.G.

Utilization of fructose by fatty tissue of the epididymis of normal and starving rats and in the presence of insulin. Biokhimiia 30 no. 3:563-566 My-Je '65 (MIRA 19:1)

1. Otdel biokhimii Instituta eksperimental'noy meditsiny AMN SSSR, Leningrad.

DESNITSKIY, Vladimir Porfir'yevich [deceased]; Prinimali uchastiye: KATUGIN, S.A.; GROMOVA, K.P., tekhnolog; DESNITSKAYA, T.K.; SOKOLOV, A.N., dots., kand. tekhn. nauk, retsenzent; LEVANDOVSKIY, S.N., inzh., red.; BORODULINA, I.A., red. izd-va; POL'SKAYA, R.G., tekhn. red.

[Making alloyed steel castings for the manufacture of heavy electric machinery] Proizvodstvo legirovannykh stal'nykh otlivok dlia energomashinostroeniia. Moskva, Gos.nauchno-tekhn. izd-vo mashinostroit.lit-ry, 1961. 196 p. (MIRA 15:1)

1. Glavnyy metallurg Nevskogo mashinostroitel'nogo zavoda im. Lenina (for Katugin). 2. Nevskiy mashinostroitel'nyy zavod im. Lenina (for Gromova).
(Steel castings) (Electric machinery industry)

GROMOVA, L.F.; PAVLOVA, T.D.

Observing the visibility of lunar surface features during the lunar eclipse of May 13-14, 1957, in Leningrad. Astron. tsir. no.189:20-21 F '58. (MIRA 11:8)

1.Astronomicheskaya observatoriya Leningradskogo universiteta.
(Eclipses, Lunar--1957) (Moon--Surface)

GROMOVA, L.F.

Observing the actual frequency of the formation of noctilucent clouds. Astron. tsir. no.192:32-33 My '58. (MIRA 11:10)

1.Astronomicheskaya observatoriya Leningradskogo gosudarstvennogo universiteta.

(Clouds)

GROMOVA, L.G.; DZHABAR-ZADE, R.M.

A standard program using the Runge-Kutta method for integrating systems of ordinary differential equations. Vych. met. i prog. 1:278-292 '62. (MIRA 15:8)
(Differential equations--Numerical solutions) (Integrals)

MASHKOVICH, S.A.; GROMOVA, L.G.

Some results of numerical pressure field forecasting by the use of the "Strela-3" electronic calculating machine. Trudy TSIP no.106:61-64 '60. (MIRA 13:12)

(Atmospheric pressure)
(Electronic calculating machines)

3(7) PHASE I BOOK EXPLOITATION SOV/2592

Moscow. Tsentral'nyy institut prognozov

Voprosy dinamicheskoy meteorologii (Problems in Dynamic Meteorology) Moscow, Gidrometeoizdat, 1959. 69 p. (Series: Its Trudy, vyp. 86) Errata slip inserted. 900 copies printed.

Sponsoring Agency: Glavnoye upravleniye gidrometeorologicheskoy sluzhby pri Sovete Ministrov SSSR.

Ed. (Title page): S. A. Mashkovich; Ed. (Inside book): L. V. Blinnikov; Tech. Ed.: I. M. Zarkh.

PURPOSE: This issue of the Institute's Transactions is intended for specialists working in the field of dynamic and synoptic meteorology.

COVERAGE: This collection of articles treat problems of short-range weather forecasting using the methods of dynamic meteorology. The use of an electronic computing machine "Pogoda" in short-range(36 hours) forecasting of pressure fields at sea level and at 300 mb is described. The programming and coding system are discussed in some detail. The author concludes that the forecasting accuracy of the method he describes is on a par with

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corresponding statistical techniques used in non-Soviet countries. References accompany each article.

TABLE OF CONTENTS:

AVAILABLE: Library of Congress
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MM/mg
11-3-59

GROMOVA, L.G.

"Decantation" method for obtaining high-melting ceresin. Proizv. smaz.mat. no.4:35-39 '57. (MIRA 11:9)

1.Pervyy Moskovskiy neftemaslozavod.
(Ceresin)

Gromova, L. G.

15(5), 25(5) PHASE I BOOK EXPLOITATION SOV/3492

Shekhoyan, Lyudmila Sergeyevna and Lidiya Grigor'yevna Gromova

Proizvodstvo konsistentnykh smazok (Grease Manufacturing) Moscow, Gostoptekhizdat, 1959. 143 p. 4,150 copies printed.

Exec. Ed.: K. F. Kleymenova; Tech Ed.: E. A. Mukhina.

PURPOSE: This is a textbook intended for improving the level of skill of technical personnel of grease manufacturing plants.

COVERAGE: The textbook deals with grease manufacturing methods. Basic principles of organic chemistry are reviewed along with descriptions of various types of greases, their utilization, and equipment used for their production. Methods for determining physicochemical properties of greases are described, and ways of improving the quality of grease with the aid of various additives are indicated. Brief information on crude stock employed for grease production as well as some information on grease components, thickening agents, fillers and grease production techniques are given. Various operations of grease manufacturing plants are described along with chemical reactions taking place in the process of grease production. Safety techniques and fire prevention measures, the

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organization of work, system of workmen's remuneration and methods for reducing production costs are reviewed. The textbook contains numerous flow sheets, tables and designs of equipment. There are 21 references, all Soviet.

TABLE OF CONTENTS:

45386
S/081/63/000/002/075/088
B149/B144

11.9700

AUTHORS: Gromova, L. G., Dintses, A. I.

TITLE: The use of esters and high-polymeric compounds in the production of hard-fat lubricants

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 2, 1963, 468, abstract 2P172 (Tr. Vses. n.-i. in-t po pererabotke nefti i gaza i polucheniyu iskusstv. shidk. topliva no.8, 1959, 177-185)

TEXT: The effect of polymeric additives of polyisobutylene (I) and polyisooctylmethacrylate (molecular weight ~12000 and 14000 respectively) on the properties of plastic lubricants, prepared from МВП ГОСТ 1805-51 (MVP GOST 1805-51) oil and also from the di-2-ethyl hexyl ester of sebacic acid (diisooctyl sebacate (DOS)) was investigated. The compositions were thickened with Li-soap of stearic acid (a powder with saponification number 0, excess of alkali up to 0.50%, moisture content 0.15%). The optimum content of soap for the compositions is 10-12%. Addition of 1-3% (in relation to the lubricant) of the indicated polymers improved the lubricant quality by strengthening its colloidal structure. For

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compositions prepared with DOS, I acts as the best structure-strengthening agent (I has a limited solubility in DOS). Plastic lubricants may be prepared with a DOS base and addition of 1 to 3% of I; they possess an insignificant volatility (≤ 0.5% at 100°C in 24 hours), low grease bleeding (1.5 to 3% at 100°C in 24 hours) and a favorable relation between shear stress and temperature, with other properties close to those of the low-temperature lubricants ЦИАТИМ-201 (TsIATIM-201) and ОКБ -122-7 (OKB-122-7). [Abstracter's note: Complete translation.]

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SOV/65-59-8-8/17

AUTHORS: Gromova, L.G. and Dintses, A.I.

TITLE: Preparation of Lithium-Silicone Lubricating Oils with High Polymeric Additives

PERIODICAL: Khimiya i tekhnologiya topliv i masel, 1959, Nr 8, pp 32-40 (USSR)

ABSTRACT: Various disadvantages of lubricants are discussed; these can be overcome by introducing different types of additives. The authors investigated the production of stable lithium-silicone lubricants when using various additives. They prepared samples of four standard silicone liquids (liquid 3, 3-L, 4 and 5) and of the residual fraction of liquid 3 obtained by vacuum distillation of the latter at a pressure of 1 mm. The liquids 3, 4 and 5 were cyclic ethyl polysiloxanes and the liquid 3-L a linear ethyl polysiloxane; the properties of the samples are given (Table 1). Phenyl-α-naphthylamine (0.25%) was used as an anti-oxidant and added to all samples. Syneresis at 100°C after 24 hours (GOST 2633-48), the effective adhesion and strength (according to the VNII NP method) and the degree of evaporation of a 0.2 mm layer at 100°C after 24 hours were determined.

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SOV/65-59-8-8/17

Preparation of Lithium-Silicone Lubricating Oils with High Polymeric Additives

Stable compositions were obtained when 10% of a thickening agent was added to the silicone lubricants 3 and 4. The stabilizing action of water on the structure of the composition was investigated and it was found that the addition of 10 to 15% of water gave the best results Experiments were carried out on the quality of lithium compositions prepared from various silicone liquids and also from dioctyl-sebacate and industrial lubricants Tsiatim-201 and Tsiatim-221 (Table 2). It was shown that compositions based on liquid 3 (which has a linear structure) and on the residue of liquid 3 have better low temperature properties and show a relatively low degree of evaporation (3 to 6%). A comparison of the properties of lithium-silicone and lithium lubricants showed that the former had a high degree of evaporation but a lower degree of syneresis. The lithium-silicone lubricants were also compared with the industrial product Tsiatim 221. The second part of the investigation was devoted to ascertaining the influence of polymeric additives on the properties of lithium-silicone lubricants.

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Preparation of Lithium-Silicone Lubricating Oils with High Polymeric Additives

polyisobutylene (M W 12000), polyisooctylmethacrylate (M W 14000) (PMA), Vinipol VB-2 (T U 2590-53). The additives were found to dissolve easily in the liquid 3 and 4 and also in the residue of liquid 3 at a temperature of 100 to 130°C. Homogeneous transparent substances were formed. VB-2 showed the greatest degree of solubility and PMA the lowest. Best results were achieved when 2 to 3% of the various substances were added. The effect of the polymer additives on the properties of lithium-silicone lubricants when using phenyl-α-naphthylamine as anti-oxidant are given in Table 3. 10% of lithium stearate was used as thickening agent in all lubricants. The adhesive properties of the lubricants were tested according to GOST 6037-54 and it was found that the "creep" temperature increased by 30 to 50°C when 2% of any of the aforementioned polymers were added. Curves showing the logarithm of the effective adhesion as influenced by the temperature and by the quantity of polymeric additive at temperatures of +50°C and -50°C; see Fig 1 and 2. Data in Fig 2 and

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SOV/65-59-8-8/17

Preparation of Lithium-Silicone Lubricating Oils with High Polymeric Additives

Table 3 show that the addition of polymeric compounds increases the effective adhesion of lubricants at 50°C by 1.5 to 3 times, that the highest increase in adhesion is ensured when using the additives PMA and VB-2. At -50°C, the effective adhesion is increased by 5% when the additive PMA is used. Literature data (Ref 6) indicate that polymeric additives cause depolymerisation, ie that long polymeric molecules are split into shorter chains. The authors carried out experiments on the decrease of effective adhesion of lubricants containing polymeric additives and ascertained the degree of adhesion on a Pavlov viscosimeter at 20°C (Fig 3). It was found that after 30 minutes, the adhesion of the investigated samples decreased to about one third but that the degree of adhesion remained unchanged when using Tsiatim-221. There are 3 figures, 3 tables and 7 references, 5 of which are Soviet and 2 English.

ASSOCIATION: VNII NP

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GROMOVA, L. G., Cand Tech Sci, "Lithium lubricating greases on synthetic liquids with admixtures of polymers and polar compounds. Moscow, 1960. (Moscow Order of Labor Red Banner Inst Petro[redacted] and Gas Industry im I. M. Gubkin). (KL, 2-61, 207).

S/[illegible]/60/000/06/002/004
E[illegible]/E112

15.6600

AUTHORS: Gromova, L.G., and Dintses, A.I.

TITLE: Influence of Polar Additives on the Quality of Lithium-Based Greases in Silicone Fluids

PERIODICAL: Khimiya i tekhnologiya topliv i masel, 1960, No 6, pp 29-35 (USSR)

ABSTRACT: Polar additives, added at concentrations up to 5% to lithium greases for silicone fluids, can improve their lubricating qualities without diminishing the colloidal stability of the grease. Colloidal stability was assessed by electron microscopy, extrusion of fluid base from the grease, and shear strength. The method of introducing the additive is important. Addition at the commencement of manufacture using silicone fluid No 4, of 1% oxidized ceresin (MNI-7) or 5% vinyl VB-2 increases stability: 5% of a sulphur additive, or 10% pentaerythryl ether mixed with monobasic C_5 - C_7 acids scarcely affect it; tricresyl phosphate (TCP) added at the start of manufacture in any concentration greatly diminishes colloidal stability. Stability is somewhat improved by introducing the additives to the melt at 205 °C, and even more so by addition to the prepared grease cooled

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E030/E112

Influence of Polar Additives on the Quality of Lithium-Based Greases in Silicone Fluids

to 60-70 °C prior to homogenization; in the latter case 3% pentachlorodiphenyl and even 3% TCP scarcely alter colloidal stability. The effects of different dispersing media have been studied at the optimum grease concentration (10% lithium stearate plus 0.25% phenyl alphanaphthylamine as an anti-oxidant). Spindle oil provides greater stability than silicone fluid No 4 (1.4% liquid extruded instead of 3.6%), but has 5 times greater viscosity at -50 °C. Results similar to silicone fluid No 4 are obtained with 26% residue silicone fluid No 3, dioctyl sebacate, thiodivalerianate, and a 1:1 mixture of thiodivalerianate and silicone fluid No 6; however, the shearing strengths are rather lower. The effects of different additives, added before homogenization, using silicone fluid No 4 as a base, have been studied. The shearing strength is scarcely altered by 1% MNI-7 or 3% pentachlorodiphenyl, increased by a factor of 2 by vinyl VB-2, and markedly decreased by 3% of sulphur additive VNII-NP, 5% pentaerythryl ether, or 3% TCP. Thus, addition of MNI-7 (1%), or 3% of vinyl VB-2, markedly improve the overall characteristics of the greases

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